

# Shared lifetime of grandmothers and grandchildren significantly increased since 1800s

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Credit: [Avinash Bhat](#)

The importance of grandmothers in the lives of their grandchildren has changed. The shared lifetime between grandmothers and their grandchildren has a fundamental effect on how grandparents and grandchildren influence each other. A study conducted by biologists at the University of Turku, based on Finnish parish registers, indicates that, in this agrarian society, the shared lifetime of grandchildren and their grandmothers was short.

A great change began in the era of industrialisation, as better hygiene and development in medicine increased grandmothers' life expectancy and also decreased infant mortality.

"The influence of grandmothers in terms of child survival has been particularly substantial once the child has grown past early infancy, and is between the ages of 2–5. Today, grandmothers are not a key factor in terms of young children's survival, but several studies have indicated that grandmothers do influence the well-being of their [grandchildren](#). Grandmothers can also lend support to their daughters by granting them opportunities to have more children and at a more rapid pace than they could without the support of their mother," says Simon Chapman.

The study conducted by Doctoral Candidate Simon Chapman, Postdoctoral Researchers Jenni Pettay and Mirkka Lahdenperä, and Academy Professor Virpi Lummaa from the Department of Biology at the University of Turku utilised Finnish parish registers, which offer a globally remarkable, extensive set of data for researching genealogical tables.

The researchers studied eight parishes for information on children born between 1790–1959 and their grandmothers. The data described how many grandchildren a [grandmother](#) received during her lifetime and how that figure changed over the decades, the age at which a grandmother had her grandchildren, how long she lived alongside each child, and whether or not the grandchild lived in the same or neighbouring parish as their paternal and maternal grandmother.

"Over the course of the time period covered in the study, more than a third of the children could never meet their grandmother: over 36% were born after the death of their maternal grandmother, and nearly 44% after the death of the [paternal grandmother](#). Over the decades, the percentages changed considerably. 80% of children born in the 1950s had a living

maternal grandmother and approximately 70% had a living paternal grandmother," says Simon Chapman.

Pre-industrially, even the children who were born while their grandmother was alive lost her relatively early. For children born prior to the 1870s, the shared lifetime with their grandmothers averaged 0–2 years. Along with industrialisation, the shared time started to increase, reaching 14 years for maternal grandmothers and 11 years for paternal grandmothers of children born in the 1950s.

## **Age of New Grandmothers Has Not Changed**

The researchers discovered that the age of mothers at the time of childbirth has remained virtually constant over the time period covered in the research. The same discovery applied to grandmothers as well. On average, women have become grandmothers between the ages of 50 and 56. However, there has been a dramatic change in the number of grandchildren each grandmother has.

"In the 1790s, grandmothers had an average 12–13 grandchildren, of whom 3–5 were born while their grandmother was still alive. Grandmothers in the 1950s got an average of 7–8 grandchildren, all born in the grandmother's lifetime," says Chapman.

In the entire time period covered in the study, 80% of grandchildren lived longer than their grandmother, while in the 1950s the number was 96%.

The researchers also aimed to assess how many grandchildren have had an actual opportunity to be in contact with their grandmother. This was accomplished by studying the places of residence in the parish records. In the 1790s, over 73% of grandchildren lived in the same parish region as their paternal grandmother, and 68% in the same region as their

maternal grandmother. In the 1950s, approximately 57% of grandchildren lived in the same parish region as one of their grandmothers.

## Results Underline Importance of Grandmothers

According to the study, the importance of shared time between grandmothers and their grandchildren had already been recognised earlier, but the factors determining the length of that time period had not been studied extensively. The recent study helps researchers to better understand menopausal influence over the centuries, the increase of the post-menopausal lifespan, and changes in family life.

The results can also be used to assess grandparents' role in supporting their grandchild in times of crisis, such as parental divorce. "Historically and still today, grandmothers are considered an important partner in raising grandchildren," the researchers state.

**More information:** Simon N. Chapman et al. Grandmotherhood across the demographic transition, *PLOS ONE* (2018). [DOI: 10.1371/journal.pone.0200963](https://doi.org/10.1371/journal.pone.0200963)

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